



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/537.089

01/06/2006

Roland Weigel

5672

8824

26936

7590

06/29/2006

SHOEMAKER AND MATTARE, LTD
10 POST OFFICE ROAD - SUITE 110
SILVER SPRING, MD 20910

EXAMINER

DUDA, RINA I

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/537,089

Applicant(s)

WEIGEL, ROLAND

Examiner

Rina I. Duda

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/2/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 6/2/05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The only reference that has been considered is US document 3303402.

Drawings

2. The drawings are objected to because the empty boxes must be textually labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-7 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Due to the removal of all reference characters from the claims the subject matter of claim 7 is now unclear, claim 7 reads --the control arrangement is designed such that the switch can be operated before the switch--. Furthermore, there is not antecedent basis for "the switches" in claim 6 because claim 1 from which claim 6 depends on does not recite any switches. Additionally, it seems that claim 13 is reciting two separate switches with two different functions, but as presented those functions are unclear.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1, 4-7, 11, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Pfarrer et al (US patent 4066937)

Art Unit: 2837

Claim 1, Pfarrer et al describe a control circuit for a single-phase motor, which includes auxiliary winding 12/14 and main winding 10, wherein said control circuit comprises an NTC thermistor 60 connected in series to the main winding in order to limit the current through the main winding and not the auxiliary winding, the current through the auxiliary winding increases until sufficient motor torque is developed and the motor begins to accelerate see column 5 lines 27-50.

Claims 4 and 5, Pfarrer et al describe switch 24a for removing the NTC thermistor and the starting capacitor after completion of the starting process see column 5 lines 50-54.

Claim 6, Pfarrer et al describes that switch 24a is only ON for a predetermined amount of time see column 5 lines 50-51.

Claim 7, Pfarrer et al describes a series of switch contacts 16A-16B being opened before switch 24a.

Claim 11, Pfarrer et al describe a method for controlling a single-phase motor comprising reducing the current through the main winding by connecting an NTC thermistor in series with the main winding and bridging the thermistor by using switch 24a after starting of the motor see column 5 lines 27-55.

Claim 16, Pfarrer et al describes that the bridging on the thermistor occurs after the motor has reached the rated speed.

Claim Rejections - 35 USC § 103

Art Unit: 2837

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 3, 8-10, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfarrer et al (US Patent 4066937) and Strachan (US Patent 3737752).

Claim 2, the difference between claim 2 and the teachings of Pfarrer et al is that claim 2 recites a starting circuit including a starting capacitor and a PTC thermistor connected to said capacitor. However, Strachan describes a motor control system comprising a starting circuit including a starting capacitor 26 connected in series to a PTC thermistor 20 and an auxiliary winding 10, wherein said starting capacitor produces a phase shift in the auxiliary winding see column 5 lines 1-3.

Therefore, it would have been obvious to one person of ordinary skill in the art to have a starting circuit as the one taught by Strachan in the motor control circuit of Pfarrer, since said starting circuit provides a suitable mechanism for effectively removing/adding elements from the circuit during starting of the motor until a desired rated speed is reached.

Claim 3, Although Strachan describes a positive temperature coefficient resistor, one can choose to use the negative temperature coefficient resistor taught by Pfarrer et,

Art Unit: 2837

al, since the resistance of said NTC resistors drops during start up so that the motor torque can be restored and the motor accelerated before motor overheating.

Claims 8 and 14, Strachan describes an operating capacitor 18 connected to the auxiliary winding for producing a phase shift with respect to the main winding. Strachan does not specify the value of the start and operating capacitors. However, Pfarrer et al describe a starting capacitor 26 having a capacitance larger than the capacitance of an operating capacitor 20.

Claims 9 and 15, Pfarrer et al discloses the claimed invention except for the value of the operating capacitor in reference to the starting capacitor. It would have been obvious to one person having ordinary skill in the art at the time of the invention was made to choose a starting capacitor at least twice as big as the operating capacitor, since it has been held that discovering an optimum value of a result effective variable only involves routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 10, Pfarrer et al discloses the claimed invention except for an NTC thermistor having a cold resistor of 10 to 30 ohms. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to choose an NTC thermistor having a value between 10-30 ohms, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claim 12, Strachan describes a motor control system comprising a starting circuit including a starting capacitor 26 connected in series to a PTC thermistor 20 and an

Art Unit: 2837

auxiliary winding 10, wherein said starting capacitor produces a phase shift in the auxiliary winding see column 5 lines 1-3. Furthermore, Pfarrer et al describes switching the starting capacitor 26 with resistor 28.

Claim 13, Pfarrer et al describes disconnecting the starting capacitor from the circuit using switches 24a and 16A-16C.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The documents cited in form PTO-892 describe other motor controller for single phase motors using positive and negative temperature coefficient resistors.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rina I. Duda whose telephone number is 571-272-2062.

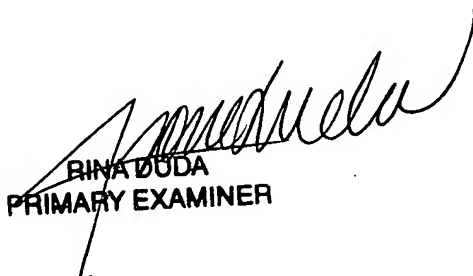
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2837

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RD


RINA DUDA
PRIMARY EXAMINER